



# 日本安全性薬理研究会

Japanese Safety Pharmacology Society

## 一般演題 (ポスター発表)

1. Physical dependence liability and blood concentrations of morphine in rats following oral administration  
○Atsushi FUJIWARA, Miki SHIMOSAWA, Misato OKADA, Masahiko IINO, Mikio SASAKI, Shinichi SATO  
Ina Research Inc.
2. Assessment of premonitory electroencephalographic (EEG) changes of drug-induced seizure using a non-human primate EEG telemetry model.  
○ Motohiro SHIOTANI<sup>1)</sup>, Norihiro NAGANO<sup>2)</sup>, Akiyoshi ISHIKAWA<sup>2)</sup>, Keita SAKAI<sup>2)</sup>, Takashi YOSHINAGA<sup>3)</sup>, Hiroshi KATO<sup>3)</sup>, Tetsuyuki TERAMOTO<sup>4)</sup>, Yoshiaki FURUYA<sup>4)</sup>, Kohei SAWADA<sup>3)</sup>  
1) Global Drug Safety, Biopharmaceutical Assessments Core Function Unit, Eisai Co., Ltd., JAPAN  
2) Sleep Science Laboratories, Tsukuba Research Center, Hamri Co., Ltd., JAPAN  
3) Global CV, Biopharmaceutical Assessments Core Function Unit, Eisai Co., Ltd., JAPAN  
4) Global Discovery Research, Neuroscience & General Medicine Product Creation Unit, Eisai Co., Ltd., JAPAN
3. The co-culture of hiPSc derived neurons and astrocytes using by novel co-culture chamber in vitro  
○Ko ZUSHIDA<sup>1)</sup>, Takayoshi MATSUBARA<sup>2)</sup>, Norimasa MIYAMOTO<sup>3)</sup>, Takeo SHIMASAKI<sup>4)</sup>  
1) Cellular Dynamics International Japan.  
2) Engineering Team, Life Science Business HQ, Yokogawa Electric Corporation.  
3) Biopharmaceutical Assessments Core Function Unit, Eisai Product Creation Systems, Eisai Co., Ltd.  
4) Medical Research Institute, Kanazawa Medical University.
4. Physiological maturation and drug responses in long-term culture of human induced pluripotent stem cell-derived cortical neurons  
○Ikuro SUZUKI<sup>1)</sup>, Aoi ODAWARA<sup>1,2)</sup>, Hiroki KATOH<sup>1)</sup>, Naoki MATSUDA<sup>1)</sup>  
1) Department of Electronics, Tohoku Institute of Technology.  
2) Research fellow of Japan Society for the Promotion of Science
5. Induction of long-term potentiation and depression phenomena in human induced pluripotent stem cell-derived cortical neurons  
○Aoi ODAWARA<sup>1,2)</sup>, Hiroki KATOH<sup>1)</sup>, Naoki MATSUDA<sup>1)</sup>, Ikuro SUZUKI<sup>1)</sup>  
1) Department of Electronics, Tohoku Institute of Technology.  
2) Research fellow of Japan Society for the Promotion of Science.
6. The state of the art in ECG Template analysis and Arrhythmia detection for Telemetry study.  
○Katsuhiko SAKAI, Yoshiharu TSURU  
Application Support Dept., Primetech Co., Ltd.



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## 7 . Effects of Background Music on Telemetry Data in Cynomolgus Monkeys

○Takanobu MOCHIDOME, Haruka INOUE, Issei TOJO, Tatsuya JIKUZONO, Yoshiki DEGUCHI  
Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd.

## 8 . Investigation of correction coefficient in probabilistic analysis for rate-corrected QT interval in ECG evaluation in cynomolgus monkeys

○Haruka INOUE, Hikaru FUKUDA, Tatsuya JIKUZONO  
Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd.

## 9 . Promising advantages of left ventricular pressure-volume relationship analysis compared with standard left ventricular pressure measurement for the assessment of cardiac contractility in monkeys

○Tomomichi ISHIZAKA<sup>1)</sup>, Yu YOSHIMATSU<sup>1)</sup>, Yu MAEDA<sup>1)</sup>, Wataru TATASAKI<sup>1)</sup>, Ken SAKURAI<sup>1)</sup>, Yoshiro TANI<sup>1)</sup>, Katsuyoshi CHIBA<sup>1)</sup>, Kazuhiko MORI<sup>2)</sup>

1) Medicinal Safety Research Laboratories, Daiichi Sankyo Co., Ltd.

2) Translational Medicine and Clinical Pharmacology, Daiichi Sankyo Inc.

## 1 0 . Assessment of electropharmacological effects of amantadine on cardiovascular system: Net balance between inward and outward current modifications in vivo

○Xin CAO, Yuji NAKAMURA, Takeshi WADA, Hiroko IZUMI-NAKASEKO, Kentaro ANDO,  
Atsushi SUGIYAMA  
Pharmacology Dept., Medicine Fclt., Toho Univ.

## 1 1 . Analysis of the cardiovascular system parameters at the time of frequent vomiting

○Masakazu IMAIZUMI, Kazuaki SASAKI, Tsuyoshi HIGUCHI, Yasuo NAKAMURA, Katsuhide NISHI  
Pharmacology Department, Nonclinical Research Center, Drug Development Service Segment, LSI Medience Corporation.

## 1 2 . Translational Research for Infrastructure Development in Drug Discovery using Common Marmosets: Development of a Repeated Dose Toxicity Study Combined with Three Types of Safety Pharmacology Studies

○ Hidemi MOCHIZUKI<sup>1)</sup>, Kunihiko OISHI<sup>1)</sup>, Mikio SASAKI<sup>1)</sup>, Atsushi FUJIWARA<sup>1)</sup>, Kengo SAKAMOTO<sup>1)</sup>, Hiroyuki TASHIBU<sup>1)</sup>, Masako ONOTOGI<sup>1)</sup>, Shin-ichi SATO<sup>1)</sup>, Chiyoko NISHIME<sup>2)</sup>, Takashi INOUE<sup>2)</sup>, Eiko NISHINAKA<sup>2)</sup>, Ryo INOUE<sup>2)</sup>, Kazuo NII<sup>3)</sup>, Yoko KOUHEI<sup>3)</sup>, Eriko TAMURA<sup>3)</sup>, Seiichi MATSUI<sup>3)</sup>, Kumiko SAITO<sup>3)</sup>, Naruaki NOMURA<sup>3)</sup>

1) Ina Research Inc.

2) Central Institute for Experimental Animals

3) Sumika Chemical Analysis Service, Ltd.



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1 3 . The efficacy and limitation of microminipig as an experimental model for assessing the drug-induced change in QT-interval

○ Takeshi WADA, Yuji NAKAMURA, Xin CAO, Hiroko IZUMI-NAKASEKO, Kentaro ANDO, Atsushi SUGIYAMA  
Department of Pharmacology, Faculty of Medicine, Toho University

1 4 . Detection of drug-induced torsade de pointes arrhythmias in vivo using a new rabbit model of acute atrioventricular block

○ Mihoko HAGIWARA, Akira TAKAHARA  
Dept. Pharmacol. Ther., Fclt. Pharmaceut. Sci., Toho Univ.

1 5 . Evaluation method for right cardiac function by echography in a rat model of monocrotaline pulmonary hypertension

○ Fumiyuki NAKANE, Maki TAKAHASHI, Yoshiyuki SUZUKI, Hiro EDA, Yasuki AKIE, Akihisa MITAKE  
Research Division, CMIC BIORESEARCH CENTER Co., Ltd.

1 6 . Functional evaluation of murine cardiomyocytes using motion imaging technique

○ Junko KUROKAWA, Kentaro TAKAHASHI, Tetsushi FURUKAWA  
Department of Bio-informational Pharmacology, Medical Research Institute, Tokyo Medical and Dental University

1 7 . Characterization of propagation property of hiPS-cardiomyocyte using motion vector prediction system

○ Takehito ISOBE, Masaki HONDA, Ryuichi KOMATSU, Mitsuyasu TABO  
Research Division, Chugai Pharmaceutical Co., Ltd.

1 8 . The characterization of the conduction property of human iPS cell-derived cardiomyocytes sheet

○ Hiroko IZUMI-NAKASEKO, Yuji NAKAMURA, Takeshi WADA, Kentaro ANDO, Atsushi SUGIYAMA  
Dept. Pharmacol., Fclt. Med., Toho Univ.

1 9 . Multi-spheroid Ca-imaging analysis of human iPS-derived cardiomyocyte for the assessment of proarrhythmic potential

○ Tadashi NAGAKURA<sup>1)</sup>, Takayoshi MATSUBARA<sup>2)</sup>, Kohei SAWADA<sup>1)</sup>  
1) Global CV Assessment Unit, Tsukuba Research Laboratory, Eisai Co., Ltd.  
2) Engineering Team, Life Science Business Headquarters, Yokogawa Denki Co., Ltd.



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2 0 . Optical action potential recording increases understanding of proarrhythmic risk assessment with multi-electrode array using human iPS cell-derived cardiomyocytes

○Tomohiko TANIGUCHI, Kohei SAWADA  
Global CV Assessment, Eisai Co., Ltd.

2 1 . Using artificial intelligence with deep convolutional neural networks, automatic classification of human iPS cell-derived cardiomyocytes extracellular potential waveforms.

○Tetsuo KITAMURA, Fumihide BUNAI, Kimihito YOSHIKAWA, Mayumi OBO, Tomoharu OSADA, Hiroaki INOUE, Hideomi UCHIDA, Yasuyuki OONISHI, Hideaki HIRATSUKA  
Nonclinical Research Center, Drug Development Service Segment, LSI Medience Corp.

2 2 . Evaluation of pro-arrhythmic effects caused by prolonged exposure of a trafficking inhibitor and anti-cancer drugs using human iPS cell-derived cardiomyocytes

○Kimihito YOSHIKAWA, Fumihide BUNAI, Tetsuo KITAMURA, Mayumi OBO, Tomoharu OSADA, Hiroaki INOUE, Hideomi UCHIDA, Yasuyuki OONISHI, Hideaki HIRATSUKA  
Nonclinical Research Center, Drug Development Service Segment, LSI Medience Corp.

2 3 . High-throughput electrophysiological assessment of drug effect on cardiac ion channels using Qube system.

○Yuka SHIBANO<sup>1)</sup>, Kazuya TSURUDOME<sup>1)</sup>, Søren FRIIS<sup>2)</sup>, Yuji TSURUBUCHI<sup>1)</sup>

1) Biolin Scientific K.K.

2) Biolin Scientific A/S.

2 4 . *In silico* assessment of cardiac safety of drugs using integrated computer model of 2-dimensional transmural human ventricular wedge preparation

○Taeko KUBO<sup>1,2,3)</sup>, Takashi ASHIHARA<sup>2)</sup>, Tadashi TSUBOUCHI<sup>1)</sup>, Takashi YOSHINAGA<sup>3,4)</sup>, Keiichi ASAKURA<sup>3,5)</sup>, Hitoshi FUNABASHI<sup>1)</sup>, Minoru HORIE<sup>2)</sup>

1) Preclinical Research Laboratories, Sumitomo Dainippon Pharma Co., Ltd.

2) Department of Cardiovascular Medicine, Heart Rhythm Center, Shiga University of Medical Science

3) iSmart, Japanese Safety Pharmacology Society

4) Global Cardiovascular Assessment, Eisai Co., Ltd.

5) Discovery Research Labs, Nippon Shinyaku, Co., Ltd.

2 5 . Long-term simultaneous measurement of Motion Vector Prediction (MVP) and extracellular multi-electrode array (MEA) system—effects of hERG trafficking inhibitors.

○Keiichi ASAKURA, Miyako WATANABE, Natsuho YOSHIDA, Seishi OCHI, Seiji HAYASHI  
Pharmacokinetics and Safety Assessment Dept., R&D Lab, Nippon Shinyaku Co., Ltd.



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## 2 6 . iSMART: *in silico* assessment of drug-induced arrhythmogenic risk using human ventricular cell model

<Goals and progress>

○Keiichi ASAKURA<sup>1,2)</sup>

1) Pharmacokinetics and Safety Assessment Dept., R&D Lab, Nippon Shinyaku Co., Ltd.

2) iSMART, Japanese Safety Pharmacology Society

## 2 7 . J-ICET\_ECG: Advanced approach to assessment of QT and proarrhythmic potential in monkeys toward the early clinical QT assessment <Interim report>

○ Hiroshi MIZUNO<sup>1,2)</sup>, Ryuichi KOMATSU<sup>1,3)</sup>, Tomomichi ISHIZAKA<sup>1,4)</sup>, Akihito ITO<sup>1,5)</sup>, Tatsuya JIKUZONO<sup>1,6)</sup>, Tadashi KAKOI<sup>1,7)</sup>, Masahiro BANDO<sup>2,8)</sup>, Tadashi KOGA<sup>6,8)</sup>, Jun HANDA<sup>8,9)</sup>, Yukio TAKAHASHI<sup>8,10)</sup>, Akihiro KANNO<sup>1,11)</sup>, Harushige OZAKI<sup>1,12)</sup>, Katsuyoshi CHIBA<sup>1,4)</sup>

1) Japanese Safety Pharmacology Society: J-ICET working group, 2) Eisai Co., Ltd., 3) Chugai Pharmaceutical Co., Ltd., 4) Daiichi Sankyo Co., Ltd., 5) NISSEI BILIS Co., Ltd., 6) Shin Nippon Biomedical Laboratories, Ltd., 7) CMIC BIORESEARCH CENTER Co., Ltd., 8) Japanese Society for Biopharmaceutical Statistics, 9) Nippon Kayaku Co.,Ltd., 10) BioStat Institute Co., Ltd. 11) Drug Safety Testing Center Co., Ltd., 12) Takeda Pharmaceutical Co. Ltd.

## 2 8 . J-ICET\_BP/HR: Preclinical hemodynamic assessment in non-rodents by considering the physiological variation range <Interim report>

○ Toshiki KAGAWA<sup>1,2)</sup>, Ryouta HAYASHI<sup>1,3)</sup>, Kengo SAKAMOTO<sup>1,4)</sup>, Hiromi NEGISHI<sup>1,5)</sup>, Hisashi NOGAWA<sup>1,6)</sup>, Fuminori MATSUBARA<sup>1,7)</sup>, Yoshiyuki MOTOKAWA<sup>1,8)</sup>, Kenta WATANABE<sup>1,9)</sup>, Yuko SEMI<sup>1,10)</sup>, Toshio HASHIMOTO<sup>2,11)</sup>, Jun HANDA<sup>11,12)</sup>, Yukio TAKAHASHI<sup>11,13)</sup>, Akihiro KANNO<sup>1,7)</sup>, Harushige OZAKI<sup>1,3)</sup>, Katsuyoshi CHIBA<sup>1,14)</sup>

1) Japanese Safety Pharmacology Society: J-ICET working group, 2) Mitsubishi Tanabe Pharma Corporation, 3) Takeda Pharmaceutical Co. Ltd., 4) Ina Research Inc., 5) LSI Medience Corporation, 6) KYORIN Pharmaceutical Co., Ltd., 7) Drug Safety Testing Center Co., Ltd., 8) KISSEI PHARMACEUTICAL Co., Ltd., 9) Sumitomo Dainippon Pharma Co., Ltd., 10) Ono Pharmaceutical Co., Ltd., 11) Japanese Society for Biopharmaceutical Statistics (JSBS), 12) Nippon Kayaku Co.,Ltd., 13) BioStat Institute Co., Ltd., 14) DAIICHI SANKYO Co., Ltd.

## 2 9 . Analysis of the Trends in Regulatory Requirements for Approval of Anti-Dementia Drugs by PharmaPendium Efficacy Module

○Yuki SATO

Elsevier Japan KK



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3 0 . Results of the JPMA survey on ICH S7B Guideline.

○ Yoichi TANIKAWA, Yasuhiro ITANO, Yoshiko OKAI, Yoshiyuki MOTOKAWA, Yuichi UTSUMI, Hiroyuki ARAI, Masahiko MORI, Manabu SHIBASAKI, Hiroki OKAMOTO, Nobutaka MORIMOTO, Takeshi TARUI, Toshihiro SAWABE, Takaichi HAMANO, Takafumi NAKAJIMA, Tomoyuki ABE, Hiroyuki HAMADA, Takashi NAGAYAMA, Takanori IKEDA, Kazuto WATANABE  
Non-Clinical Evaluation Expert Committee, Drug Evaluation Committee, Japan Pharmaceutical Manufacturers Association